

Junxiu TANG

CONTACT INFORMATION

Zhejiang University
State Key Lab of CAD&CG
Interactive Data Group
Hangzhou, Zhejiang, 310058, China

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RESEARCH INTERESTS

My research explores the transformation of data into *valuable insights*, *compelling narratives*, and *aesthetic expressions*. It encompasses advanced data visualization techniques, rigorous scientific logic, and artistic presentation methods. Specifically, my past research lies in the design and interaction of data-driven communication, storytelling, and event sequence visualization. I am also keen to explore relationship between data and art.

Keywords: Data Visualization, Visual Analytics, Fixed-order Event Sequence, Embedded Visualization, Data-driven Art, Data-driven Communication, Data Video, Storytelling, Human-AI Collaboration

EDUCATION

Zhejiang University, Hangzhou, China 09.2019–12.2024
Department of Computer Science and Technology
College of Computer Science and Technology
Ph.D., with Prof. Yingcai Wu, at ZJUIDG
Thesis: Theoretical and Applied Research of Visualizations for Fixed-order Event Sequence

Inria, Palaiseau, France 11.2023–06.2024
Inria Saclay Center
Visiting Ph.D. Student, with Dr. Petra Isenberg, at Aviz
Research Focus: Embedded Visualizations in Swimming Videos

Zhejiang University, Hangzhou, China 09.2014–06.2019
Department of Digital Media Technology
College of Computer Science and Technology
B.Eng.
Research Focus: Design Guidelines on Augmenting Short-form Data Videos

RESEARCH INTERSHIPS

JD Intelligent Cities Research, Jing Dong Technology 02.2022–06.2022
Beijing, China
Research Intern, Software Engineer
Building visual analytics systems for urban computing, especially intelligent transportation and disease control. Supervised by Dr. Jie Bao and Prof. Yu Zheng.

IDEA Lab, Alibaba-Zhejiang University Joint Research Institute of Frontier Technology (AZFT) 09.2019–12.2021
Hangzhou, China
Research Intern
Cooperated with DAMO Academy and Cainiao

Cainiao Smart Logistics, Alibaba Group

Hangzhou, China

09.2020-12.2021

Research Intern, UI&UX Designer

Building the visual analytics system for intelligent logistics, especially on order processing monitoring and optimization.

Alibaba DAMO Academy for Discovery, Adventure, Momentum and Outlook, Alibaba Group

Hangzhou, China

11.2019-09.2020

Research Intern, Algorithm Engineer

Worked on visualization theory and intelligent methods for data video generation and augmentation.

PUBLICATIONS

Asterisk* indicates equal contribution.

Junxiu Tang, Fumeng Yang, Jiang Wu, Yifang Wang, Jiayi Zhou, Xiwen Cai, Lingyun Yu, and Yingcai Wu. A Comparative Study on Fixed-order Event Sequence Visualizations: Gantt, Extended Gantt, and Stringline Charts. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2024*, DOI: [10.1109/TVCG.2024.3358919](https://doi.org/10.1109/TVCG.2024.3358919), OSF.

Junxiu Tang, Yuhua Zhou, Tan Tang, Di Weng, Boyang Xie, Lingyun Yu, Huaqiang Zhang, and Yingcai Wu. A Visualization Approach for Monitoring Order Processing in E-Commerce Warehouse. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2022 (Proceedings of IEEE VIS '21)*, DOI: [10.1109/TVCG.2021.3114878](https://doi.org/10.1109/TVCG.2021.3114878).

Junxiu Tang, Lingyun Yu, Tan Tang, Xinhuan Shu, Lu Ying, Yuhua Zhou, Peiran Ren, and Yingcai Wu. Narrative Transitions in Data Videos. Short Paper. In *Proceedings of IEEE VIS '20*, DOI: [10.1109/VIS47514.2020.00037](https://doi.org/10.1109/VIS47514.2020.00037), Project webpage.

Junxiu Tang, Rui Sheng, Yifang Wang, Xinhuan Shu, Xiaojiao Chen, Tan Tang, and Yingcai Wu. Posts with No Response: The Island of Loneliness. In *IEEE VIS Arts Program (VISAP2023@IEEE VIS)*, DOI: [10.1109/VISAP60414.2023.00007](https://doi.org/10.1109/VISAP60414.2023.00007), OSF.

Junxiu Tang, Jiayi Zhou, Yifang Wang, Xinhuan Shu, Peiquan Xia, Xiaojiao Chen, Tan Tang, and Yingcai Wu. Loss of Sonnet 18. In *ACM SIGGRAPH Art Gallery (2024)*, DOI: [10.1145/3641523.3669939](https://doi.org/10.1145/3641523.3669939), OSF.

Junxiu Tang, Huimin Ren, Zikun Deng, Di Weng, Tan Tang, Lingyun Yu, Jie Bao, Yu Zheng, and Yingcai Wu. Towards Better Illegal Chemical Facility Detection with Hazardous Chemicals Transportation Trajectories. In *Proceedings of ChinaVis '24*, DOI: to appear.

Tan Tang*, **Junxiu Tang***, Jiewen Lai, Lu Ying, Peiran Ren, Lingyun Yu, and Yingcai Wu. SmartShots: Enabling Automatic Generation of Videos with Data Visualizations Embedded. Extended Abstract. In *ACM International Conference on Multimedia (Proceedings of MM '20)*, DOI: [10.1145/3394171.3414356](https://doi.org/10.1145/3394171.3414356).

Tan Tang, **Junxiu Tang**, Jiewen Lai, Lu Ying, Yingcai Wu, Lingyun Yu, and Peiran Ren. SmartShots: An Optimization Approach for Generating Videos with Data Visualizations Embedded. In *ACM Transactions on Interactive Intelligent Systems (TiiS) 2022*, DOI: [10.1145/3484506](https://doi.org/10.1145/3484506).

Sadia Rubab, **Junxiu Tang**, and Yingcai Wu. Examining Interaction Techniques in Data Visualization Authoring Tools from the Perspective of Goals and Human Cognition: A

Survey. In *Journal of Visualization 2021*, DOI: 10.1007/s12650-020-00705-3.

Tan Tang, **Junxiu Tang**, Jiayi Hong, Lingyun Yu, Peiran Ren, and Yingcai Wu. Design Guidelines for Augmenting Short-form Videos using Animated Data Visualizations. In *Journal of Visualization 2021 (Proceedings of ChinaVis '19)*, DOI: 10.1007/s12650-020-00644-z.

Jiayi Zhou, Renzhong Li, **Junxiu Tang**, Tan Tang, Haotian Li, Weiwei Cui, and Yingcai Wu. Understanding Nonlinear Collaboration between Human and AI Agents: A Co-design Framework for Creative Design. In *ACM CHI conference on Human Factors in Computing Systems (Proceedings of CHI '24)*, DOI: 10.1145/3613904.3642812.

Xinhuan Shu, Alexis Pister, **Junxiu Tang**, Fanny Chevalier, and Benjamin Bach. Does This Have a Particular Meaning? Interactive Pattern Explanation for Network Visualizations In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2024 (Proceedings of IEEE VIS '24)*, DOI: 10.1109/TVCG.2024.3456192.

Xinhuan Shu, Aoyu Wu, **Junxiu Tang**, Benjamin Bach, Yingcai Wu, and Huamin Qu. What Makes a Data-GIF Understandable? In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2021 (Proceedings of IEEE VIS '20)*, DOI: 10.1109/TVCG.2020.3030396, Project webpage.

Sadia Rubab, Lingyun Yu, **Junxiu Tang**, Yingcai Wu. Exploring Effective Relationships Between Visual-Audio Channels in Data Visualization. In *Journal of Visualization 2023*, DOI: 10.1007/s12650-023-00909-3.

Tan Tang, Kaijuan Yuan, **Junxiu Tang**, Yingcai Wu. Toward the Better Modeling and Visualization of Uncertainty for Streaming Data. In *Journal of Visualization 2018 (Proceedings of ChinaVis '18)*, DOI: 10.1007/s12650-018-0518-y.

Ran Chen, Xinhuan Shu, Jiahui Chen, Di Weng, **Junxiu Tang**, Siwei Fu, and Yingcai Wu. Nebula: A Coordinating Grammar of Graphics. In *IEEE Transactions on Visualization and Computer Graphics (TVCG) 2022*, DOI: 10.1109/TVCG.2021.3076222.

Yifang Wang, Yang Wang, Yifan Cao, Huamin Qu, **Junxiu Tang**, and Yingcai Wu. Explore Mindfulness without Deflection: A Data Art Based on the Books of Songs. Pictorial. In *Proceedings of IEEE VISAP '21*, DOI: 10.1109/VISAP52981.2021.00014, Project webpage.

ACADEMIC TALK

A Comparative Study on Fixed-order Event Sequence Visualizations: Gantt, Extended Gantt, and Stringline Charts.

Tampa, Florida, US (Virtual)
Conference talk @VIS 2024

10.2024

Loss of Sonnet 18.

Denver, Colorado, US
Conference artist talk @SIGGRAPH 2024

07.2024

Posts with No Response: The Island of Loneliness.

Hong Kong, China
Conference artist talk @ChinaVis 2024

07.2024

	Towards Better Illegal Chemical Facility Detection with Hazardous Chemicals Transportation Trajectories. Hong Kong, China Conference talk @ChinaVis 2024	07.2024
	Posts with No Response: The Island of Loneliness. Melbourne, Victoria, Australia Conference artist talk @IEEE VIS 2023	10.2023
	Visualization x Art. Hangzhou, Zhejiang, China Invited talk @School of Design and Innovation, China Academy of Art	06.2023
	A Visualization Approach for Monitoring Order Processing in E-Commerce Warehouse. New Orleans, Louisiana, US (Virtual) Conference talk @IEEE VIS 2021	10.2021
	Narrative Transitions in Data Videos. Salt Lake City, Utah, US (Virtual) Conference talk @IEEE VIS 2020	10.2020
	Design Guidelines for Augmenting Short-form Videos using Animated Data Visualizations. Chengdu, Sichuan, China Conference talk @China Vis 2019	07.2019
	A Gear-like Storyline of Inception. Shanghai, China Conference talk @China Vis 2018	07.2018
	Toward the Better Modeling and Visualization of Uncertainty for Streaming Data. Shanghai, China Conference talk @China Vis 2018	07.2018
ART EXHIBITION	Loss of Sonnet 18. SIGGRAPH Art Gallery, Denver, Colorado, US	07.2024
	Posts with No Response: The Island of Loneliness. China Vis Art Exhibition, Hong Kong, China Infomation+ Exhibition, Edinburgh, Scotland, UK IEEE VIS Art Exhibition, Melbourne, Victoria, Australia	07.2024 11.2023 10.2023
	A Gear-like Storyline of Inception. China Vis Art Exhibition, Shanghai, China	07.2018
	Co-organizer What Do Visualization Art Projects Bring to the VIS Community? Panel @IEEE VIS 2024	2024
ACADEMIC SERVICE		

Student Volunteer

IEEE Visualization & Visual Analytics (VIS)	2024
China Visualization and Visual Analytics Conference (ChinaVis)	2024
IEEE Eurographics / VGTC Symposium on Visualization (EuroVis)	2024
Infomation+ Conference (Info+)	2023

Conference Review

IEEE Visualization & Visual Analytics (VIS)	2022-2024
ACM Conference on Human Factors in Computing Systems (CHI)	2024-2025
IEEE Pacific Visualization Symposium (PacificVis)	2024-2025
China Visualization and Visual Analytics Conference (ChinaVis)	2022-2024

TEACHING**Zhejiang University**

Winter 2022

21191590: Cross Media Visualization
 21121280: Information Visualization
 Teaching Assistant

Zhejiang University

Summer 2021

International Visualization Summer School
 Teaching Assistant, Teaching Assistant Coordinator (TAC)

Zhejiang University

Summer 2019-2020

International Visualization Summer School
 Teaching Assistant

Zhejiang University

Winter 2020

21191590: Cross Media Visualization
 21121280: Information Visualization
 Teaching Assistant, Teaching Assistant Coordinator (TAC)

MENTORSHIP**Zhejiang University**

Weichen Sun, Ph.D. student, co-mentored with Tan Tang	2024
Jiayi Zhou, undergraduate student, co-mentored with Yingcai Wu	2022-2024
Yuhua Zhou, Master student, co-mentored with Yingcai Wu	2020-2021
Boyang Xie, undergraduate student, co-mentored with Yingcai Wu	2020-2021
Lu Ying, undergraduate student, co-mentored with Yingcai Wu	2019-2020